Strangulated Rectal Prolapse – a Rare Therapeutic Challenge

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Case report

• A 37-year-old man presented to the emergency department with a large irreducible full thickness rectal prolapse of 4 hours duration.

• No previous history of prolapse was reported.

• His prior medical history included severe mental retardation treated with multiple medications.

• On clinical examination, the patient had a normal temperature and was hemodynamically stable.

• His abdomen was soft with mild tenderness in the lower abdomen. Bowel sounds were present. The laboratory investigations showed mild leucocytosis with left shift.

• On rectal examination the prolapsed rectum appeared congested and oedematous, but viable.
On admission - before trial of reduction
Case report - continued

• Initial attempts to reduce the prolapse were unsuccessful due to severe pain. In consequence - reduction under general anesthesia was tried, but proved futile.

• As the prolapsed and strangulated bowel was not obviously necrotic, conservative measures were now applied: sedation, muscle relaxants and Sol. MgSO4 10% compresses (to reduce edema).

• Unfortunately, all these efforts proved ineffective and ischemic changes of the mucosa progressively appeared. Therefore, patient was taken to the operating room after four days of attempted conservative treatment.
Incarcerated Rectal Prolapse
(view before surgery)
The Altemeier procedure
( perineal proctosigmoidectomy )

- **Advantages of Altemeier procedure**

  - May be performed in young and healthy patients as well as frail and elderly patients because of its low morbidity.

  - In young women who wish to avoid the potential hazard of infertility as a result of adhesion formation, the Altemeier procedure may be warranted, even though it is associated with a higher recurrence rate than abdominal procedures.

  - In young men, the risk of autonomic nerve damage with consequent sexual dysfunction, may be avoided by a perineal repair.

- The Altemeier procedure is also the procedure of choice when the prolapsed rectum is irreducible or incarcerated.
The Operation
Incarcerated Rectal Prolapse

( mobilized recto-sigmoid)
Incarcerated Rectal Prolapse

( the resected specimen)
Incarcerated Rectal Prolapse

( hand sewn one-layer coloanal anastomosis)
Perineal Rectosigmoidectomy
( final result )
Protective Brooke’s Loop Ileostomy
Follow up

• The patient’s postoperative course was quite uneventful.

• Five weeks later, the patient was readmitted for ileostomy closure (following contrast study to evaluate the anastomosis and rule out obstruction distal to the stoma).

• Since then - the patient remains well.
Strangulated Rectal Prolapse  
( Discussion 1 )

• Rectal prolapse is thought to be a true intussusception that progresses over time to full thickness protrusion of the rectal wall through the anal orifice.

• Incarceration with strangulation of an acute rectal prolapse is a rather unusual entity that represents a surgical emergency.

• The peak age of incidence is the seventh decade in women, whereas the relatively few men who have this problem may develop prolapse at the age 40 or less.

• One striking characteristic of younger patients is their increased tendency to have autism, syndromes associated with developmental delay, and psychiatric comorbidities requiring multiple medications.

• Patients with primary or “acute” prolapse following a diarrhea episode may have competent sphincter which precipitates edema, incarceration and strangulation of the prolapsed segment.
Strangulated Rectal Prolapse
( Discussion 2 )

• Current repair strategies for non-complicated rectal prolapse are broadly categorized as either abdominal or perineal.

• Clinical experience as reflected the literature indicate that surgery should be performed early in irreducible prolapse.

• Optimal treatment for strangulated rectal prolapse is controversial – reports of therapy are scant and difficult to evaluate.

• Conservative management aims to reduce the edema and allow reduction of the prolapsed rectum with later planned definitive surgery.

• Edema may be reduced by solution of sugar, by injection of hyaluronidase or by applying an elastic compression wrap.

• Attempts of conservative management have low efficacy, cause delay, and do not prevent the need for a subsequent operation.
Strangulated Rectal Prolapse
(Discussion 3)

- There are two widely used perineal procedures: the Delorme operation and perineal rectosigmoidectomy (Altemeier operation).

- The advantage of perineal procedures is that laparotomy is avoided, which is well suited for high-risk patients (male patients; elderly frail patients with significant comorbidities; patients with incarcerated, strangulated, or even gangrenous prolapsed rectal segment).

- Perineal proctosigmoidectomy was first described by Mikulicz in 1889. This procedure was later performed by Miles in 1933 and Gabriel in 1948. Altemeier popularized this technique in 1971.

- Perineal rectosigmoidectomy involves full-thickness resection of the rectum and sigmoid with a coloanal hand sewed or stapled anastomosis.
Strangulated Rectal Prolapse
( Discussion 4 )

• The main disadvantage of perineal proctosigmoidectomy is the high recurrence rate that varies from 5% to 50% depending on the series. More recent studies refer to much lower rates (3% - 16%) when compared to the abdominal approaches.

• The two major complications seen after an Altemeier procedure are anastomotic breakdown and bleeding. These can occur with either hand sewn or stapled anastomosis.

• The literature fails to demonstrate superiority of stapled over hand sewn technique in coloanal anastomosis.

• In our case, the Altemeier procedure was completed by diverting ileostomy to protect the difficult hand sewn anastomosis. Due to extreme bowel edema, the surgeon considered the anastomosis unsafe.
Conclusions

- Incarceration rarely complicates the full thickness rectal prolapse necessitating emergency surgery.

- Emergency surgery in this situation, remains a high-risk procedure and surgeons should be familiar with the technique of Altemeier operation for managing this challenging problem, as it is the only option in this setup.
Happy End and Happy Operating Team
Long-term Follow up – Satisfied Surgeon